**Information on termites from community members in Diga woreda**

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This information was collected as part of community engagement exercises as part of the N2 work on innovation platforms. 3 kebeles were chosen to represent upstream, midstream and downstream: Bikila, Arjo and Lelisa Dimtu respectively (see map below). In addition to ranking, mapping and focus group discussions information was gathered from informal discussions with community members, government staff and local DAs.

According to a staff member of the local Agricultural Bureau 10 out of 21 kebeles within Diga woreda are affected by termites. According to correspondence with an academic from Wollega University problems with termites were first reported in Mana Sibu woreda (250kms west of Nekemte) during the 1960s. It is thought that the infestation is caused by declining soil fertility resulting from deforestation, degradation, overgrazing and other related factors. Termites have expanded to neighboring neighbouring areas around Nekemte, including Nedjo (woreda next to Mana Sibu), Gimbi, Diga, Guto wayu, and recently Sibu Sire. The expansion of termites has serious repercussions for local livelihoods including lack of suitable grass for livestock, nectar for beekeeping, reduced crop yields, and generally declining productivity of land. Termites also pose a threat to newly built infrastructure; house damage was cited by farmers as a major problem (they only last for around 3 years), they damage corrals and a health station in Bikila kebele.

**Map of Diga showing the selected kebeles**

16 people were selected from each kebele, 8 males and 8 females of different ages and socio-economic status. During the community engagement exercises termite infestation was ranked as a priority problem, either priority 1 or 2, by community members (see table below).

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|  | **Bikila** | **Arjo** | **Lelisa Dimtu** |
| **Priority Issues** | 1. Monkeys | 1. Termites | 1. Termites |
| 2. Termites | 2. Soil Erosion | 2. Mango disease |
| 3. Irrigation | 3. Mango Disease | 3. Water problems |
| 4. Coffee disease | 4. Livestock disease | 4. Soil Erosion |
|  | | | |
| **Additional Issues** | Deforestation | Irrigation | Irrigation |
| Livestock Disease | Pests: mice & worms | Deforestation |
| Soil Erosion | Soil Fertility | Climate Change |
| Climate Change | Deforestation | New weeds |
| Soil Fertility | Population Growth | Livestock disease |

**Community identified issues after ranking exercises**

Local government is currently working to eradicate/control termites using a variety of methods: chemical application and removing queens. This has been started recently and so far 4 kebeles have been successfully treated according to the local Agriculture Bureau. However, according to community members these methods have had limited success, the amount of chemicals distributed is not enough and even when mounds are treated it is not a long term solution because the termites come back. One woman reported 12 areas around her house and land were severely affected by termites, and meant she could not produce anything. DAs used chemicals after which she managed to produce a small amount, but after some time the termites came back. Historically chemicals were used in Lelisa Dimtu to control termites, this practice was introduced by a foreigner who established a farm and introduced mangos to the area during the 1960s. This continued during the Derg time but stopped under the present government.

Local people have a detailed understanding of termites and their behavior, but it is hard to know how much of this is local knowledge and how much is informed by extension work. Participants reported that the termites build mounds and the ‘king’ (queen) lives inside a ‘house’ which is waterproof, very strong and difficult to break. They can tell the age of the ‘king’ by its layers, they can live up to 8 years and they suspect that when one dies it is immediately replaced by another. They say that termites communicate with each other, act on orders and work together to attack crops and houses. They are perceived to be ‘enemies of the people’.

Traditional methods are practiced locally: flooding, removing queens, destroying mounds, smoking mounds, putting salt onto destroyed mounds, and use of a tree called ‘Sootaloo’ (possibly *Milletia ferruginea* orBirbira in Amharic, used in some places for fishing) (Karunamoorthi et. al. 2009). However, participants reported that termites are adapting to traditional methods of control. They are going deeper into the ground so the queens are harder to find, it is difficult for them to eradicate all of the queens so even if they kill one it is quickly replaced by another, the ‘houses’ of the queens are waterproof so resistant to flooding, they believe that the termites know when they are going to flood the mounds so they move before the water reaches them, and the method of putting salt onto destroyed mounds is no longer effective. Community members used to organize work groups (Debbo) in the past to control termites but they have stopped this practice because the termite infestation is now beyond their capacity to control.

Focus group participants across the 3 kebeles reported that there has been widespread deforestation due to the expansion of crop land. Termites have always been present in the area but they have become a serious problem in recent times. Some connect the problem of termites with deforestation, participants said that when there was more forest cover the termites were less of a problem, however, local perceptions vary. One community member believed that the forests are the cause of the termite problem because the presence of trees attracts termites. If such beliefs are widespread it could encourage the cutting of trees, thereby possibly exacerbating the situation. It would be interesting to look at aerial/historical photographs to see the extent of the deforestation.

People also reported that there is an animal known locally to kill termites (possibly aardvark) but this has declined in numbers possibly due to local tradition of ‘*facha’* (killing of wild animals to gain hero status). It is also common in many African countries for nocturnal animals to be hunted due to cultural and religious beliefs. Some think this is also playing a role in termite increase as the natural balance has been disturbed.

A paper by Dechasa Jiru (2006) in proceedings of a workshop on ‘Implementation and Adoption of Integrated Pest Management in Ethiopia’ highlights that the main causes of termite problems can be attributed to destruction of vegetation, reduction in amount of litter and organic matter and that Aardvarks are becoming extinct in many localities due to human activities. Increase in environmental temperature, moisture scarcity due to deforestation and removal of organic rich soil by erosion also influence the buildup of termite populations. There is a need to take a systems approach to these issues, focusing on termite eradication alone will not address the underlying causes. Working on the termite issue could be a way of gaining community trust and provides a potential entry point and incentive for addressing wider NRM issues.

In the Diga area there is a traditional practice of corralling which is mainly used for soil fertility purposes, but this needs further investigation. Community members report that they corral for different lengths of time depending on the season, 3-5 days during the wet season and 7-9 days during the dry season. The duration varies depending on the size of the corral and the number of animals. Corralling has been practiced in the area for generations but apparently it is now decreasing due to lack of labor as a result of more people going to school. Livestock disease is a major problem in the area including ‘*gandii’* (trypinosomiasis), ‘*qarxasa’* (now on the decline), ‘*abba gorba*’ (causes swelling of legs and body in cattle), ‘*bishoftuu’*. Women participants in Arjo kebele stated that they can’t corral cattle for long periods of time in the same place during the rainy season due to tsetse. Women also reported that tsetse flies increase during the rainy season and in forested areas, which may be another cause of deforestation. They also reported that they keep corrals for shorter periods of time during the rainy season due to tsetse. This is of relevance for any research into corralling and the use of corrals as a termite control measure but may just be based on local perceptions which are not necessarily accurate or representative.

Mekane Yesus, a local church organization, has done work on termite management in the Gimbi area, and could be possible partners in the project. However, it seems that existing termite control projects are focusing mainly on eradication rather than the underlying causes or drivers, i.e. wider NR imbalances. A sustainable termite management approach is needed which takes into account the role that termites play in ecosystems and the underlying drivers.

Dechasa Jiru (2006: 89-90) suggests the use of multi-purpose trees that can be used for both NRM and termite control: Neem (medicinal), Pepper tree (already present in Ethiopia but can be invasive), Moringa (highly nutritious for both humans and animals, can also be used for preventing malaria and cleaning drinking water), Croton macrostaghys (medicinal and can be used for honey production). These could provide potential options for both termite control, land management and livelihoods.

**References**

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